

ABSTRACT OF THE DISCLOSURE

A method and system for dynamically replacing a failing processor in a server system configured with IA-32 architecture without requiring hardware changes to the IA-32 architecture or administrative effort. At least one processor of the multiprocessor system (MP) is initially provided as a reserve (or hot-spare) processor that remains in an idle, off, or low-power mode. While in that mode, the OS is prevented from initially utilizing the hot-spare processor. When a processor failure is detected, SMI code running on a good processor instructs the OS to hold off allocating processes to the failing processor. Contemporaneously, the SMI (and OS) activates and completes an initialization of the hot-spare processor to prepare it to begin receiving the held-off processes. Control is then returned to the OS, which updates the "active" processor list and allocates the threads that were running on the failing processor to the hot-spare processor.